

# GRID laptop reveals design flaw

One of the hottest trends in computing is portables that pack the power of desktop computers.

And by portable I don't mean the sewing machine or even the lunch box designs of recent memory. I'm referring to "laptops" — light enough and small enough to literally rest on your lap.

One entrant in this crowded arena is an "XT" class laptop from GRID Systems.

GRID — one of the earliest players in this market — is known for supplying rugged, if pricey, units. One of their best coups has been supplying laptop computers for the NASA space shuttles.

A less exotic model for Earthlings is the GRID 140XT. But this machine has one design flaw that makes it irksome to use as a regular computer.

The 140 XT's specifications are:

■ Physical characteristics. At a comfortable 12.8 pounds, with battery, it can be used as a true laptop. Its gray metal case has handsome styling. It's the sort of solid

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style, 8088-type chip running at the pedestrian speeds of 4.77 or 8MHz; the one floppy is a 3½-inch, 720 kilobyte capacity, while the hard disk is 20 megabytes; it has a usable random access memory of 640 kilobytes, which is not expandable.

■ Display and keyboard. The keyboard has only 76 keys, so many serve double duty. The keys have some audible feedback and are too noisy for taking minutes in a meeting.

■ Display. The high-contrast blue characters on the backlit liq-

uid crystal display screen are easy to read. The screen refreshes itself relatively quickly, but like many LCD-type displays, there is a noticeable lag as one screen paints over another. The video standard is of the old style.

■ Processor, drives and memory. The processor chip is an unremarkable, old-

style, 8088-type chip running at the pedestrian speeds of 4.77 or 8MHz; the screen refreshes itself relatively quickly, but like many LCD-type displays, there is a noticeable lag as one screen paints over another. The video standard is of the old style.

All of these features considered together yield a capable, lightweight portable that could almost double as a desktop computer. That is, if you can live with one very annoying minus.

Any laptop that uses a hard disk and optionally runs on batteries has to have some energy conservation features. On this model the main battery saver is the automatic shut down of the hard disk after there has been no access for several minutes.

The downside of this arrangement is having to endure a lag of roughly eight seconds whenever you do anything that involves the hard disk.

While it might be argued that this is a necessary concession for portable hard disk use, this annoy-

ing feature persists even when the computer is running on wall current.

I've used the computer for several months now, mostly as a part-time desk unit, and I still haven't adjusted to this frustrating delay.

■ The bottom line: The laptop market is so competitive that successful models have to do just about everything right. The GRID 140XT comes close in with its XT technology in an attractive, reasonably priced package.

If this machine had a continuously running hard disk when it's not powered by batteries, then it would be a solid contender in the laptop market.

The 140XT costs \$2,750 from GRID Systems Corp., P.O. Box 5003, Fremont, Calif. 94537; (415) 656-4700.

Hillel Segal's weekly column evaluates gadgets, small-computer hardware and software, seminars, and books designed to enhance business productivity.